

FTD-IT 65-770

AD621040
#65-63949

TRANSLATION

METHOD OF CORROSION RETARDATION FOR STEEL
AND IRON IN ACIDS AT HIGH TEMPERATURES

By

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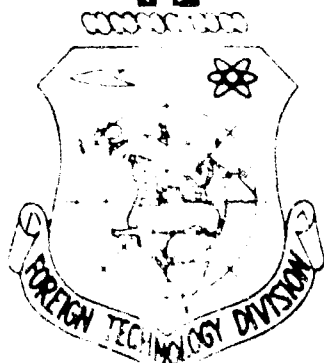
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UNEDITED ROUGH DRAFT TRANSLATION

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English pages: 2

SOURCE: Patent No. 162739 (Appl. No. 847640/22-2, July 16,
1963), (Russian), 1 page.

TA5001415

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METHOD OF CORROSION RETARDATION FOR STEEL AND IRON IN ACIDS AT HIGH TEMPERATURES

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A small number of high temperature, acidic corrosion inhibitors for ferrous metals are known from the literature. Related to them, from organic materials, are several alkaloid compounds, nitrogen-containing bases, dibenzyl-sulfoxide, and others.

The proposed corrosion inhibitor for iron and steel can (in practice) completely stop the dissolution of these metals and alloys in solutions of saline and sulfuric acid during temperatures of 20 to 100°C, and at a concentration of acid from 0.3 to 38%.

The suggested corrosion inhibitor -chloridebenzyl quinoline - is a chemical compound, which is formed during the heating of an equimolecular mixture of quinoline and benzyl chloride.

Its introduction, in the amount of 1g/l, into solutions of sulfuric and saline acids, in the range of the indicated concentrations, and during

a temperature of 20°C, allows for the protection of ferrous metals from corrosion on the average of 96%. During an increase in temperature, the protective effect of the inhibitor decreases insignificantly, and at 100°C, the protective amount is 94.0%.

The acid solution, inhibited by the chloride of benzyl quinoline, does not change its properties in the course of time or during heating up to 200-250°C.

Object of the Invention

The method of corrosion retardation for steel and iron in acids, at high temperatures, is distinguished by the fact that chloride benzyl quinoline is added as an acid inhibitor.